AN ANALYSIS OF MILITARY BUDGETING

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by

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A national budget system was established in 1921. However, little progress was accomplished in the military budget process until the passage of Public Law 81-216 (Title IV of the National Security Act Amendments of 1949), almost thirty years later. Since that time the progress made in the budget process of the military might be compared to the gathering momentum of a snowball rolling down a steep hill. The era since the end of World War II, has been a period of reform with particular emphasis on the financial management and the budget process. The most noticeable impact on the budgeting process has taken place since Robert S. McNamara has been Secretary of Defense. Through his Program Change Control System, he has added flexibility to the Department of Defense's financial management and decision-making process.

Objectives of Thesis

The objective of this thesis is first, to trace the evaluation of the military budget process since the establishment of the national budget system in 1921, with particular emphasis being placed on the present day system. A second objective is to analyze the present day system. The last objective is

personally to become knowledgeable in the military budget process.

The method of research has been indirect. The majority of data have been compiled from books, public documents, articles, periodicals, and reports in the field of budgeting.

Acknowledgment

Numerous personal interviews were conducted with Colonel Kenneth C. Houston, U. S. Marine Corps, Office of the Comptroller, Department of the Navy. His technical knowledge and assistance in the preparation of this thesis have been a guide and an inspiration throughout this research.

CHAPTER I

BACKGROUND

General

From the enactment of the Budgeting and Accounting Act of 1921, which established a national budget system, until the latter part of the 1940's, military budgets were based on objects of expenditure and organizational units. It was not until after World War II, that the military as well as other government departments and agencies began to show progress in relation to the budgetary process.

In 1946, the Navy Department submitted its budget for fiscal year 1948 in two alternate forms. One was submitted in the traditional way based on Navy appropriations; the other form was prepared on a program basis. Both of these budgets were submitted to the Congress; however, both the Senate and the House of Representatives appropriation committees rejected the budget based on programs.[1]

Not until the passage of the National Security Act of 1947, did the importance of the budget in the military come into focus. From the newly

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[1]Frederick C. Mosher, Program Budgeting: Theory and Practice, (New York: American Book-Stratford Press, Inc., 1954), p. 80.

established post of Secretary of Defense, James Forrestal, used his influence to push for a reorganization of the appropriation structure along the program basis.[1]

> Forrestal's problems during late 1947 and more particularly during 1948 in preparing and presenting an integrated defense budget have had considerable significance in the development of unification as well as in recent budgeting in the Defense Department. The open appeals by the Air Force for more than the Defense Department had approved for it; the later requests by the Army for more than the Defense Department had approved for it; the passing by Congress of appropriations above Presidential requests for the Air Force and the President's subsequent impounding of appropriated funds--all these attest to the significance of the budget.[2]

First Hoover Commission

During this turbulent period, a task force was engaged by the (Hoover) Commission on Organization of the Executive Branch of the Government to study the organization and operation established by the National Security Act of 1947. This task force stressed the importance of investing greater authority in the Secretary of Defense over the budgets and expenditures of the individual services. The Hoover Commission made basically the same recommendations which the task force had made, with the exception of recommending the establishment of comptrollers in the Defense Department and individual services. The Commission also recommended that the Secretary of

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[1] Ibid., p. 80.

[2] Ibid., p. 32.

Defense be given full and final authority, subject only to the authority of the President, over the budgets of the individual services as well as their expenditures as appropriated by the Congress.

Reorganization of Fiscal Management in the Department of Defense (Title IV of the National Security Act Amendments of 1949)

As a result of the reports generated by the task force and the Hoover Commission, President Truman recommended to the Congress changes to the National Security Act of 1947. The Senate Committee on Armed Services drafted a bill which incorporated President Truman's recommendations and after being renumbered and amended, Title IV was added to the National Security Act of 1947, by Public Law 81-216 as a new title. This new title was established to create efficiency and economy in the Department of Defense by reorganizing the financial management in the Department.[1]

More specifically, Title IV

> 1. Provided for the establishment of a Comptroller for the Office of the Secretary of Defense and a Comptroller in each of the three military Departments, in order that there may be an organized effort to carry out these objectives.
> 2. Directed that a performance-type budget be adapted by the Department of Defense with a segregation of operating and capital programs.[2]

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[1] Ibid., pp. 32-42.

[2] U. S. Congress, Senate, Committee on Government Operations, Financial Management in the Federal Government, Senate Document No. 11, 87th Congress, 1st Session (Washington: Government Printing Office, 1961), pp. 75-76.

By enacting Public Law 216, the Congress directed a performance-type budget for the entire Department of Defense. Prior to this time, the Congress had appropriated billions upon billions of dollars without knowing what the money was being used for or why.

> In the Army, for instance separate budgets were submitted for each of the technical services: the Quartermaster Corps, the Transportation Service, Ordnance Service and Supplies, and so forth. These separate budgets could not be related to the security objectives of the country without a knowledge of interrelationships within the Army that even the most experienced military expert would find it difficult to command. The best reviewers could do would be to compare the budget for a particular service with the record for the preceding year and raise questions about increases.[1]

The performance budget was a significant improvement over the old "objects" type budget. However, the performance budget fell short of identifying the budget based upon functions, activities and projects as called for by the Hoover Commission. The budget classification did not show how much it costs to maintain the strategic strike force, how much it costs to defend the country from surprise attack, how much it costs to maintain the country's airborne capability, etc.

As Jesse Burkhead states,

> Performance classification in and of itself does not assure more desirable government programs at a lower cost, although this is frequently implied in discussions of the subject. At best, performance classification provides factual evidence which may be of assistance to all levels of management in determining effectiveness. Performance data, when properly grouped in relation to larger programs, can also be of assistance to legislators and citizens as they select desirable

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[1]Arthur Smithies, The Budgetary Process in the United States (New York: McGraw-Hill Book Company, Inc., 1955), pp. 232-233.

government activities and programs. Performance classification can point up the concrete things done and the dollar cost of these, but the value judgments about them are made in the politic mind--and, for society, in the political process.[1]

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[1]Jesse Burkhead, Government Budgeting (New York: John Wiley & Sons, Inc., 1956), pp. 139-142.

CHAPTER II

UNDERSTANDING THE PERFORMANCE BUDGET IN THE MILITARY

Appropriation Structure

After the Congress passed Public Law 216 (Title IV--National Security Act Amendments of 1949) and directed the Department of Defense to adopt a performance-type budget, it took the services until 1953 to make the change-over. The services were somewhat hampered in their reconstruction to the new budgetary procedure by the outbreak of hostilities in Korea.

As Frederick C. Mosher states, "The first, and probably to date the most widespread, changes of the performance budget movement have been essentially classificatory in nature."[1] The first step was the development of classifications based on functions, second, was the reconstruction of the appropriation structure with the idea of reducing the number of appropriations, and lastly was the development of appropriations based on projects, activities and functions as contrasted with appropriations based on objects of expenditures and organizational units.

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[1]Mosher, p. 83.

As a result of this movement toward a performance-type budget, the Navy reduced the number of its appropriations from 52 to 21 titles and eventually to 13; the Army reduced the number of its appropriations from 21 to 8; and the Air Force system incorporated nine appropriation titles.

The Army and Air Force appropriation titles were somewhat similar when compared to the Navy's system which was built around its bureau system of organization, in which each bureau was given jurisdiction over one or more than one appropriation. Figure 1 shows the major appropriation title along with the units which had responsibility over these titles.[1]

As can be seen from the appropriation titles of the Air Force, the difference between the Air Force and the Navy's appropriation structure is quite apparent. The appropriation titles of the Air Force are:

Aircraft and Related Procurement

Major Procurement Other Than Aircraft

Acquisition and Construction of Real Property

Maintenance and Operations

Military Personnel Requirements

Research and Development

Reserve Personnel Requirements

Air National Guard

Contingencies

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[1] Ibid., pp. 84-85.

FIGURE 1

Major Organization Units and Appropriation Titles,

Department of the Navy[a]

Organization	Appropriation Title
Bureau of Personnel	Military Personnel, Navy Military Personnel, Naval Reserve Military Personnel, Officer Candidates Navy Personnel, General Expenses
Marine Corps	Military Personnel, Marine Corps Military Personnel, Marine Corps Reserve Marine Corps Troops and Facilities
Bureau of Aeronautics	Aircraft and Facilities Construction of Aircraft and Related Procurement
Bureau of Ships	Ships and Facilities Shipbuilding and Conversion
Bureau of Ordnance	Ordnance and Facilities Ordnance for Shipbuilding and Conversion
Bureau of Medicine and Surgery	Medical Care
Bureau of Yards and Docks	Civil Engineering Public Works
Office of Naval Research	Research
Bureau of Supplies and Accounts	Service-wide Supply and Finance
Office of Chief of Naval Operations	Service-wide Operations (Activities 1 through 7a)
Office of the Secretary of the Navy	Service-wide Operations (Activities 7b through 12) Operations and Conversion of Naval Petroleum Reserves Naval Petroleum Reserve Numbered 4, Alaska

[a]Frederick C. Mosher, Program Budgeting: Theory and Practice (New York: American Book-Stratford Press, Inc., 1954), p. 86.

Budget Categories

In order to have a common denominator on which to compare and evaluate the budgets of the individual services, the Department of Defense directed the three military departments to submit their budget estimates based on a standard classification of basic cost categories. These categories are fundamentally similar to the appropriation structure of the Army and Air Force general staff activity. They are:[1]

Military Personnel

Operation and Maintenance

Major Procurement and Production Costs

Acquisition and Construction of Real Property

Civilian Components

Research and Development

Industrial Mobilization

Establishment-Wide Activities

Since the establishment of categories of the Defense classification, the Navy reduced the number of its appropriation titles to 13. These appropriations are divided into "annual appropriations" and "continuing appropriations." The titles of these 13 appropriations are as follows:

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[1] Smithies, p. 233.

Annual Appropriations

Military Personnel, Navy

Military Personnel, Marine Corps

Reserve Personnel, Navy

Reserve Personnel, Marine Corps

Operations and Maintenance, Navy

Operations and Maintenance, Marine Corps

Continuing Appropriations

Aircraft and Related Procurement, Navy

Shipbuilding and Conversion, Navy

Procurement of Ordnance and Ammunition, Navy

Procurement, Marine Corps

Research, Development, Test, and Evaluation, Navy

Military Construction, Navy

Military Construction, Naval Reserve

> . . . maintenance and operations, minor procurement, and military personnel costs are funded through annual appropriations. On the other hand, major procurement and military construction . . . are funded through "continuing or no-years appropriations." Research and development is funded by a continuing appropriations.[1]

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[1] Department of the Navy, Office of the Comptroller, The Budget Process in Navy, October 1959, pp. 2-3-2-4.

Budget Cycle

The budget cycle has four phases: preparation (formulation), authorization, execution, and audit. The cycle officially begins in the various services when the service secretaries receive the budget plan and policy guidelines from the Secretary of Defense. The Secretary of Defense's guidelines are based on recommendations of the Joint Chiefs of Staff. The Secretaries then provide additional guidance to their individual services.

The formulation phase normally begins with the issuance of requirements by the Joint Chiefs of Staff and normally extends over approximately 19 months. A typical budget formulation phase for the various services has its beginning in December or January of each year. The formulation of the budget for fiscal year 1957, whose execution phase ran from 1 July 1956 to 30 June 1957, was initiated in the latter part of calendar year 1954, or the beginning of 1955.

Budget formulation in the Department of Defense and the individual services in subdivided into four stages. The first stage is devoted to the preparation of departmental programs. The second stage consists of the preparation of departmental estimates. After the Secretary of Defense issued his guidelines each of the service comptrollers issued a "budget call" requesting budgets based on program objectives. The third stage is the period in which the budget is reviewed by the Secretary of Defense, Bureau of the Budget, and President prior to submission of the budget to the Congress when it convenes in January. The last stage of budget formulation

consists of congressional review. Under ideal circumstances, the Congress passes all appropriation bills by 30 June, thus authorizing the obligation and expenditures of funds commencing 1 July. However, in recent years the Congress has passed no appropriation bills by 30 June, and under these circumstances the Congress passes a resolution authorizing the government agencies to continue their operations until the pending appropriation bills are passed.[1] Figure 2 is a graphical illustration of the budget process.

The execution phase covers the period from 1 July through 30 June of the following year. Funds become available after appropriation bills are signed by the President.

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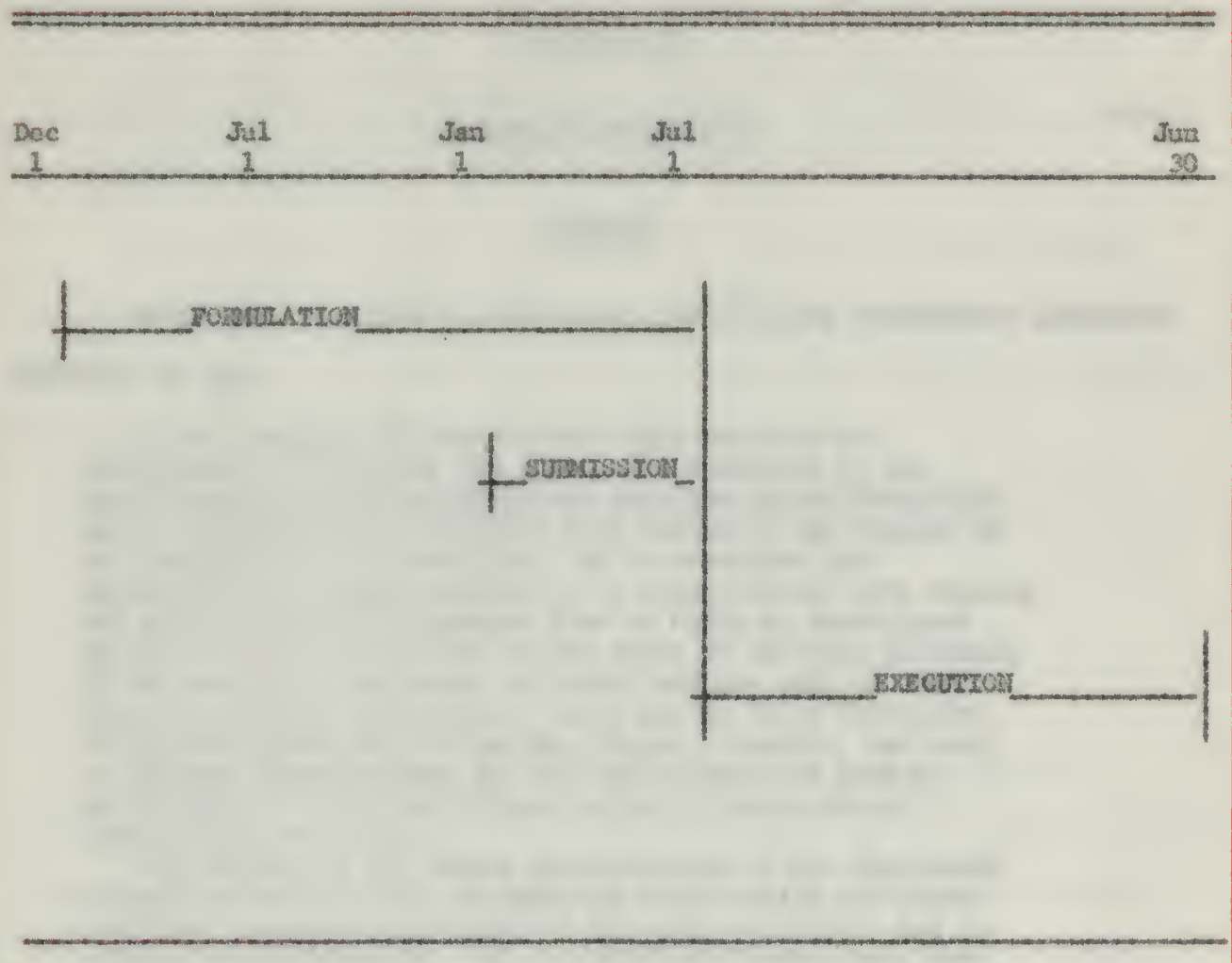
[1]Smithies, pp. 243-246.

FIGURE 2

Preparation, Submission and Execution of the Budget



CHAPTER III

PROGRAM FORMULATION

General

Frederick C. Mosher in discussing the military performance structure had this to say:

> . . . for a variety of reasons they fall short of the desideratum of directing the reviewers' attention to the basic program and policy decisions that the Hoover Commission and a great many other students feel should be the concern of the Congress and the Executive. It is true that the concentration on major components or categories of cost reveals and points up much information that is basic to intelligent appraisal: the strength and direct costs of military personnel in the services; the amount or number and the cost of major items of military procurement, which are at least indicative of military strength; the amount, nature, location, and cost of military construction; the cost and content of medical activities; the cost and subject matter of research and development; and others.
>
> But nowhere in the budget presentations of the Department of Defense does one find an approach to answering the basic question: how much protection (or how much insurance) are we buying with this budget? Or, in terms of alternatives, how much more (or less) protection would we obtain by the addition (or subtraction) of another billion or ten billion dollars?[1]

Arthur Smithies states that the performance budget is a marked improvement over the old way of budgeting in the military in depicting what

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[1]Mosher, p. 92.

the budget is to accomplish. However, the performance budget fails to answer questions that would arise in evaluating the merits of programs. He further states,

> This budget classification does not reveal the size, the activities, and the costs of the fleet, of the Strategic Air Force, or of an army. It does not show how much is to be spent for combat operations, for the active defense of the United States.[1]

It is apparent from the instructions that President Kennedy gave to Robert S. McNamara upon his assumption of office as Secretary of Defense that he, President Kennedy, was advocating a military budget based on programs. The instructions which Mr. McNamara received were:

> Develop the force structure necessary to our military requirements without regard to arbitrary budget ceilings, and Procure and operate this force at the lowest possible cost.[2]

Objectives

Even with the passage of Title IV of the National Security Act Amendments of 1949, which required a performance-type budget be adopted by the Department of Defense, the Department still lacked the machinery to review, analyze and consolidate the programs developed by the individual services.

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[1]Smithies, p. 234.

[2]Office of the Secretary of Defense, Memorandum for the President, from the Secretary of Defense, Defense Department Cost Reduction Program, 5 July 1962.

Each of the services had its own procedure for developing programs to accomplish assigned missions. President Eisenhower tried to give the Secretary of Defense the authority to transfer funds between the services in the Reorganization Act of 1958, but was unsuccessful. However, the Reorganization Act of 1958, did go part way in meeting this requirement by establishing the unified operational commands.

The remaining part of the requirement to control the funds of the individual services was undertaken in the spring of 1961, when a study was conducted to classify military activities in terms of missions, and to extend the planning time to show the effect of programs in future years.

The first formal step to establish this integrated programming/financial management for the Department of Defense came with a directive from Charles J. Hitch, Assistant Secretary of Defense (Comptroller). In his words, the fundamental objective of the new system (Program Change Control System) is

> . . . to integrate the planning and programming and the financial management functions in order to provide better tools for decision-making by the Secretary of Defense and his military advisors; and to create a planning and programming/financial management system that is keyed to continuous program decision-making and not just geared to the annual budget cycle. In such a system, not only would budget decisions be program decisions, as they inevitably are now, but program decisions would be budget decisions. That is, decisions to embark on programs would be explicitly decisions to provide the resources required to carry them out.[1]

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[1]Department of the Navy, Office of the Comptroller, Program Change Control System in the Department of the Navy, NAVEXOS P-2416, August, 1962, p. 1-1.

Almost three months to the day after Mr. Hitch issued his directive to establish an integrated programming/financial management system for the Department of Defense, the Secretary of Defense issued a relevant memorandum to the service secretaries. The purpose of this memorandum was to inform the Secretaries of the Army, Navy and the Air Force that he had directed the Assistant Secretary of Defense (Comptroller) to conduct further studies in which to improve the planning-programming-budgeting procedure in the Department of Defense.

The purpose of the programming study was to develop a system in which planning and controlling of major programs could be made at the highest levels within the Department of Defense. The major objectives of the programming system provided:

> 1. Planning oriented around major missions. Basic decisions regarding the broad aspects of Defense efforts cannot be based on the traditional split between the Services. . . . Decisions must recognize the interdependence of the Services and the possibilities for trade-offs between competing methods of accomplishing similar missions. . . . The mission-oriented units of military force constitute the "output" of Defense activity and, as such, serve as the prime focus for decision making.
> 2. Ability to relate resource inputs to military output. Each proposed force structure has its cost. . . . This cost must be expressed in dollar terms, since the total sacrifice of resources required to implement a force structure can best be gauged by the single measure, dollars. Nevertheless, an estimate of the time-phased requirements for major resources must also be expressed in terms of physical units. . . . The Programming System must be capable of providing both financial and nonfinancial estimates of the resource inputs required over time in order to obtain a specified time-phased military output.
> 3. Coordination of long-range planning with budgeting. Budgets and funding decisions must be compatible with long-range programming decisions. . . . If a need for a revision in

programs is recognized during the budget review process, the Programming System must provide a means for changing the approved programs in order to achieve compatibility.

4. Continuous appraisal of programs. Defense planning should not be rigidly tied to any arbitrary calendar period. . . . The Programming System must provide a means for continuous review of program decisions and a mechanism for changing the programs whenever a need for a change is recognized. . . .

5. Progress reporting. Control of approved programs must be exercised through a system of timely reports. . . .

6. Ability to make cost-effectiveness studies. The Programming System must provide a routine capability for making cost-effectiveness studies of alternative force structures. The costing techniques used must be accurate enough to provide a basis for comparing programs, yet at the same time responsive enough to allow frequent studies of many alternatives without imposing repeated, burdensome workloads on DOD personnel.

7. Integration of OSD information systems. The Programming System imposes rather heavy requirements on the Services. . . . The Programming System can play a major role in the development of an integrated OSD management system.[1]

In effect, the Secretary of Defense now has the authority which President Eisenhower had sought in the Reorganization Act of 1958. Mr. McNamara has the control over the various service programs which in effect dictates the size and make-up of future service organization.

With control over programs from their inception, authority to transfer funds during the current fiscal year is largely superfluous, since a given year's budget is relatively inflexible, having been shaped by decisions made in previous years. Through the program package approach the Secretary of Defense can control those early decisions.[2]

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[1]Department of Defense, Study Report on the Programming System for the Office of the Secretary of Defense, 25 June 1962, pp. I-1-I-3.

[2]Harry C. White and Robert J. Massey, "Program Packaging--Opportunity and Peril," United States Naval Institute Proceedings, (December, 1961), p. 35.

Program Structure

In the new military context, programing is the planning and controlling the allocation of resources to accomplish specific military outputs. These allocations of resources and military output are known as "program elements" and "material items." This system is concerned with comparing alternate methods, by their costs, their effectiveness, and their feasibility in accomplishing specific missions.[1]

Captain White and Lieutenant Commander Massey stated that

> The program approach facilitates "rational trade-offs" by identifying the various systems, measuring the cost of all the "inputs," and measuring or estimating the "output" or contribution they make toward the achievement of our security objectives.[2]

As defined by the Department of Defense, a "program element" is an integrated activity, a combination of men, equipment and facilities which together constitute an identifiable military capability or support activity. To further explain what is meant by "program elements," the following remark by Mr. Hitch, in his testimony before the Subcommittee on National Policy Machinery of the Senate Committee on Government Operations, is helpful. He stated that program elements consist of "such forces as B-52 wings, infantry

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[1]Department of Defense, Study Report on the Programming System for the Office of the Secretary of Defense, 25 June 1962, p. II-1.

[2]White and Massey, p. 27.

battalions, and combatant ships, taken together with all the equipment, men, installations, supplies, and support required to make them effective military forces."[1]

These program elements are then grouped into a program (formerly program package) based on a common mission or set of purposes. This interrelated group or aggregate of program elements is considered together because they support each other or are a close substitute for each other. The Department of Defense has been organized into nine programs, as follows:

Program I - Strategic Retaliatory Forces. This program includes a number of categories which include land based aircraft, land and sea based missiles; command, control, and communication as well as headquarters and command support.

Program II - Continental Air and Missile Defense Forces. This program includes such program elements as surface-to-air missiles, early warning systems, air defense interceptors, etc.

Program III - General Purpose Forces. This program is the largest of all the programs and includes the forces required to fight local or limited wars as well as general engagements. All Marine Corps units, most of the Army's combat units, the Navy's combatant ships as well as support vessels, not including the Polaris submarine, etc.

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[1]Charles J. Hitch, Statement before the Subcommittee on National Policy Machinery of the Senate Committee on Government Operations, 24 July 1961, p. 6.

Program IV - Airlift and Sealift Forces. This program includes the Air Forces troop carrier wings, the Military Air Transport Service (MATS) and the Military Sea Transport Service (MSTS).

Program V - Reserve and Guard Forces. This is arranged differently in each service, the arrangement is according to major mission(s).

Program VI - Research and Development. This program includes R/D activities not specifically associated with program elements.

Program VII - General Support. This program includes such things as training, recruiting, medical support, etc.--activities which cannot be associated with specific missions, systems, etc.

Program VIII - Civilian Defense.

Program IX - Military Assistance Program.

Within the Department of Defense, "resource inputs" are expressed in terms of "resource categories," and are divided into two types, unique and homogeneous. As with program elements, categories must be grouped in such a way to be usable by top-management for decision-making, while at the same time eliminating unnecessary detail. Resource categories are measured in financial and nonfinancial terms when possible.

Relation of Program Elements and Resource Categories

The sum of all program elements constitutes the total military output and the sum of all resource categories equals the total resource input to Defense programs. Thus, the two dimensions of planning--the input and output dimension--merely provide different "slices" of the same basic

overall DOD program. Neither dimension alone gives sufficient information for all OSD planning and control; both taken together provide a complete picture of the sources and uses of resources among the various Defense activities.[1]

The relating of program elements to resource categories is a two stage process:

1. Establishment of gross resource requirements;

2. Determining new requirements for resources and acquisition plan.

The initial step in gross resource planning is the determination of the total gross requirements of resource categories for each program element.[2] This is illustrated in Figure 3.

The next step is to develop a schedule to show the gross resources which will be required over a period of time to support a given program. If the resources are not available within the Department of Defense then plans must be made for acquiring and financing the net additional resources. Figure 4 is a continuation of Figure 3, and gives a summation of the planning for acquiring the new requirements.[3]

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[1]Department of Defense, Study Report of the Programming System for the Office of the Secretary of Defense, 25 June 1962, pp. II-1 to II-5.

[2]Ibid., pp. II-5-II-7.

[3]Ibid., pp. II-7-II-9.

FIGURE 3

Gross Requirements Matrix End FY 1965[a]

Force Structure		3	17	3	50	0	2	
Program Element / Resource Category		CVA Forrestal Class	Attack Carrier Air Groups	Marine Aircraft Wings	Tactical Aircraft Forces F-110A (F4H)	Tactical Aircraft Forces F-111A	Army Forces Pacific Infantry Divisions	Total Gross Requirements (Ending Availability)
F-111A, R&D ($ millions)								
Ships, CVA, Forrestal Class (Ea)		3						3
F4H (F-110A) Aircraft (Ea)	Navy		300	150				450
	Air Force				500			500
Other Aircraft (EA)			1400	450				1850
M-14 Rifles (Thousands)				10			30	40

[a]Department of Defense, Study Report on the Programming System for the Office of the Secretary of Defense, 25 June 1962, p. II-6.

FIGURE 4

Acquisition Matrix, FY 1965[a]

Resource Category		Total Gross Requirements (Ending Availability)	Consumption or Replacement	Beginning Availability	Required in FY 1965	Required Obligation Authority (Millions)		
						FY 63	FY 64	FY 65
F-111A, R&D ($ millions)								250.0
Ships, CVA Forrestal Class (Ea)		3	0	3				
F4H (F-110A) Aircraft (Ea)	Navy	450	5	300	155	500.0	225.0	
	Air Force	500	5	200	305	1000.0	525.0	
Other Aircraft (Ea)		1850	10	1900	0			
M-14 Rifles (Thousands)		40	4	20	24		2.4	

[a]Department of Defense, Study Report on the Programming System for the Office of the Secretary of Defense, 25 June 1962, p. II-8.

Detailed planning is primarily concerned with nonfinancial items; however, the purpose of planning is to determine the cost of force structure over a period of time. The common denominator used to determine resource cost is the dollar. Costs can be related to resource categories because all resources acquired have a cost figure. Once the cost of resource categories is determined, then other costs can be determined, such as cost by program elements.

In the Department of Defense, program elements are the basis on which top management makes its major program decisions. In order to determine the cost of these decisions, it is necessary to know the cost of the program elements. Further, the costs of program elements are necessary in order to determine what it costs the Department of Defense to perform its various missions. However, the usefulness of program element cost is limited by the problems encountered in allocating resource input costs to program elements. The major problem encountered is proportioning the cost of an activity which supports more than one program element.[1]

Cost Analyses

Mr. Hitch, in his book, The Economics of Defense in the Nuclear Age, points out that there are predominately two schools of thought when considering

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[1] Ibid., pp. II-9-II-11.

defense needs. Some feel that defense needs should be considered only on the basis of cost. In other words, the Defense Department must plan its defense needs within a specified budget figure. The other group feels that defense requirements should be based on needs alone. This feeling was brought out in hearings before the subcommittee of the Committee on Appropriations when Senator Chavez told General Maxwell D. Taylor, "We would like to know what you need and not what the Budget Bureau thinks you should have."[1]

"The truth is, however, that one cannot properly draw up defense plans on the basis of either cost alone or needs alone. There is no budget size or cost that is correct regardless of the payoff, and there is no need that should be met regardless of cost."[2] In speaking before the Annual National Conference of the Armed Forces Management Association, Mr. Hitch stated:

> The financial management system must serve many other purposes. Certainly, it must produce a budget in a form acceptable to Congress. It must account for funds in the same manner in which they are appropriated. It must provide to managers at all levels in the Defense establishment, the financial information they need to do their particular jobs in an efficient and economical manner. It must produce the financial information required by other agencies of the Government--Bureau of the Budget, the Treasury and Government Accounting Office.

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[1]Department of Defense Appropriations for 1957, Hearings Before the Subcommittee of the Committee on Appropriations, U. S. Senate, 84th Congress, 2nd Session (Washington, D. C.: U. S. Government Printing Office, 1956), p. 93.

[2]Charles J. Hitch and R. N. McKean, The Economics of Defense in the Nuclear Age (Cambridge: Harvard University Press, 1960), pp. 46-47.

> But all this is not enough. The financial management system must also be made to provide the data needed by top Defense management to make the really crucial decisions, particularly on the major forces and weapons systems needed to carry out the principal missions of the Defense establishment. These decisions cannot be made rationally without an adequate knowledge of available alternatives, in terms of their military worth in relation to their cost.[1]

The program system is designed to supply data for cost-effectiveness studies. In other words, the system is designed to achieve an overall military effectiveness, from the large but not unlimited resources. "This requires that a methodical examination be made of alternative ways of accomplishing desirable military missions in order to select those weapons and forces which provide the greatest return for the defense dollar."[2]

Changing Approved Programs

Unforeseen circumstances and/or events both political and economical, both here at home and abroad, may cause a change to an already approved program. Changes may also be initiated as a result of a reevaluation of a program by the implementing service, or changes may occur as a result of revisions to the proposed budget as it passes the various review stages, commencing with the individual service review and terminating with the

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[1]Charles J. Hitch, Assistant Secretary of Defense (Comptroller) before the Annual National Conference of the Armed Forces Management Association, Shoreham Hotel, Washington, D. C., 1 March 1961.

[2]Department of Defense, Study Report on the Programming System for the Office of the Secretary of Defense, 25 June 1962, p. II-14.

Congressional review.

The service responsible for the program is responsible for initiating the change proposal to the Secretary of Defense when it is desired to make a change of sufficient magnitude that it exceeds the total obligational authority (TOA) "threshold" for either the current budget fiscal year or the total cost to the latest approved "Five-year Force Structure and Financial Program." Under this arrangement the Secretary of Defense is able to supervise the "Program Change Control System" by use of the exception rule and focus his attention on new program proposals. Changes which do not exceed the established "thresholds" are made by the service secretaries.

Once the proposed change is approved it is the approved change that is controlled, rather than the initial proposal. This control should be such that it can be directly related to the approved proposal. This is required in order to insure that actual results attained are in accordance with the approved program; in other words, performance results must be reported in terms of program elements and resource categories. Control of costs is exercised through resource categories, while program elements are used to evaluate physical performance.[1]

In order that the full impact of programs can be analyzed, the Office of the Secretary of Defense requires that program element cost be

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[1]Ibid., pp. II-12-II-13.

submitted to cover a five year period, and in addition that this cost be submitted by

1. total obligational authority (TOA);
2. appropriation and budget title; and
3. categories of costs.[1]

Programs and Budget

The formulation and review phase of programs is followed by the preparation of the budget in terms of programs and in terms of appropriations. The budget is prepared in terms of programs so that military activities can be classified in terms of their missions--thus placing the emphasis on military missions rather than on the individual service, plus giving the Congress and the American people some "rough" answers to questions they have been asking for years--questions like, how much does it cost to defend the United States from surprise attack, or how much does it cost to maintain a strategic retaliatory force?

Figure 5 depicts the Department of the Navy budget in terms of programs.

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[1]Department of the Navy, Program Change Control System in the Department of the Navy, NAVEXOS P-2416, August, 1962, pp. 2-7-2-9.

FIGURE 5

Department of the Navy
The Budget by Program, FY 1963
(in Millions of Dollars)[a]

	Program	Amount
I	Strategic Retaliatory Forces	$2,034.3
II	Continental Air and Missile Defense Forces	135.3
III	General Purpose Forces	8,892.2
IV	Sealift/Airlift Forces	48.0
V	Reserve and Guard Forces	347.3
VI	Research and Development	1,169.9
VII	General Support	3,236.3
	Total Obligational Authority	$15,863.1

[a]Department of the Navy, Program Change Control System in the Department of the Navy, NAVEXOS P-2416, August, 1962, p. 2-12.

The Department of the Navy had no dollars in Programs VIII and IX.

For purpose of comparison, the same budget is shown in Figure 6 on an appropriation basis along with a distribution of each appropriation by program.

FIGURE 6

Department of the Navy

Summary of Budget Plan--By Program and Appropriation, FY 1963[a]

(millions of dollars)

	Program								Total
	I	II	III	IV	V	VI	VII	IX	
Military Personnel, Navy	44	57	1,469	27	72	47	1,063	10	2,790
Military Personnel, Marine Corps	--	--	417	--	21	--	230	4	671
Reserve Personnel, Navy	--	--	--	--	77	--	7	--	84
Reserve Personnel, Marine Corps	--	--	--	--	28	--	--	--	28
Operation & Maintenance, Navy	126	54	1,378	1	83	24	1,174	1	2,840
Operation & Maintenance, Marine Corps	--	--	76	--	5	--	110	--	191
Proc. of Aircraft & Missiles, Navy	422	5	2,577	--	25	63	68	--	3,360
Shipbuilding & Conversion, Navy	889	--	2,015	20	--	--	58	--	2,982
Procurement, Marine Corps	--	--	227	--	17	--	15	--	259
Other Procurement, Navy	145	13	577	--	12	16	188	1	953
Research, Dev., Test & Eval., Navy	380	4	88	--	--	997	6	--	1,474
Military Construction, Navy	25	1	75	--	--	23	101	--	225
Military Construction, Navreserve	--	--	--	--	7	--	--	--	7
TOTAL	2,029	135	8,898	48	347	1,170	3,019	16	15,863[b]

[a]Department of the Navy, Program Change Control System in the Department of the Navy, NAVEXOS P-2416, August, 1962, p. 2-13.

[b]Total includes Classified projects. Note: Due to rounding, figures may not add to totals.

CHAPTER IV

BUDGET FORMULATION IN NAVY

General

Before budget formulation--comes the establishment of objectives. In order for the Navy Department to establish objectives which are consistent with national objectives and goals, it must receive guidance from higher authority. Once these guidelines are received then the Navy must further amplify them and prepare detailed objectives.

Higher Authority Guidance

Guidance and direction is received from two sources: the highest executive level--the President, and the Secretary of Defense. The guidance furnished by these authorities has been described as follows:

> In providing guidance to the Secretary of Defense, the President, of course, relies heavily for advice on his immediate staff agencies and other groups established to assist in the formulation of policy. Among the more important of these for budget purposes are the Bureau of the Budget, the Council of Economic Advisors, and the National Security Council.
>
> Presidential guidance, which usually covers broad areas such as fiscal policy, economic assumptions; and the general level of the military effort, is usually transmitted to the Secretary of Defense through the Bureau of the Budget--the

President's immediate staff office charged with responsibility for development of the budget of the United States Government.

The Secretary of Defense, in turn, provides military and fiscal guidance to the Navy. Based on the recommendations of the Joint Chiefs of Staff, for example, he provides the Navy with approved military programs such as force levels and personnel strength. In addition, he provides the fiscal ground rules to be followed in preparing the budget.

The amount of direction and guidance received from higher levels varies from year to year depending on many considerations such as the international situation, the economic outlook, and changes in administration. Very often, guidance is received piecemeal during the budget formulation period--rather than at the beginning when, from an ideal viewpoint, it is most needed.[1]

The Department of the Navy realizes that the field of budgeting is complicated and is ever changing. These changes and complications are not caused by the personnel engaged in budgeting but major decisions which are affected by technological advancements, international situations, economic considerations, etc., which are beyond the control of the Navy.

Program Objectives

The budget cycle formally commences in the Navy after the Secretary of the Navy receives the policy guidelines and budget plans from the Secretary of Defense. However, limited informal guidance, such as contemplated force levels and military strengths, are issued by the Secretary of the Navy for preliminary planning purposes. This guidance is

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[1]Department of the Navy, Office of the Comptroller, The Budget Process in Navy, October, 1959, pp. 3-1-3-2.

normally issued in the beginning of December, nineteen months in advance of the budget year.

The next step taken within the Department of the Navy, based on the policy guidelines and budget plans received, is the development of the annual program objectives by the Chief of Naval Operations and the Commandant of the Marine Corps, under the general direction of the Secretary of the Navy.[1]

The program objectives are the basis on which the annual budget estimates are based. The program objectives are primarily concerned with the accomplishment of the missions of the Navy. The program objectives are ". . . expressions of reasonably attainable goals which are planned for accomplishment during a particular fiscal year."[2]

> In other words, program objectives contain the increments of major programs which are feasible of accomplishment during a year. In addition, the program objectives set forth for the budget year the proposed:
> 1. Personnel strength and force levels.
> 2. State of training and degree of readiness to be attained.
> 3. Deployment of major units.
> 4. Annual increment of mobilization requirements.
> 5. Policies on procurement, mobilization, personnel, and other areas.[3]

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[1] Ibid., p. 2-6.

[2] Department of the Navy, Bureau of Naval Personnel, Financial Management in the Navy, NAVPERS 10792-A, 1952, p. 48.

[3] Ibid., p. 48.

Program objectives are well thought out, detailed plans that have been under consideration and development for many months and in some cases years. Programs prescribed and recommended by the Secretary of the Navy, the Chief of Naval Operations, the Commandant of the Marine Corps, program sponsors, and bureaus and offices in addition to the annual increment from the projected program objectives provide the base for the selection of programs for a specific year.[1]

The responsibility for coordinating the preparation of program objectives rests with the Assistant Chief of Naval Operations (ACNO), General Planning. From the guidance he has received, the ACNO forwards the program objectives, personnel strength, degree of readiness, assumptions, and other policy guidelines to the various program sponsors and program coordinators in the Navy.

Program sponsors are the six Deputy Chiefs of Naval Operations, Assistant Chief of Naval Operations, Intelligence and Communications, the Commandant of the Marine Corps and the Chief of Naval Material. The Assistant Chief of Naval Operations, Intelligence and Communications has just recently been added as a program sponsor. The program sponsors exercise authority and responsibility over all naval programs. The staff level planners are representatives of the program sponsors and are permanent working groups. The program coordinators are responsible to collect,

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[1]Research Report of the 1961 Class Navy Graduate Comptrollership Program, Performance Budgeting and Financial Management in the Department of the Navy, The George Washington University, Washington, D. C., pp. 27-28.

coordinate and submit to the ACNO, General Planning, the information to be included in the Program Objectives.

> From the information received the ACNO (General Planning) prepares a draft of the program objectives. This involves adjusting, tailoring, and balancing programs to ensure that the Program Objectives will:
>
> (1) Conform to any military and fiscal guidelines received;
>
> (2) Ensure a well-balanced naval establishment;
>
> (3) Provide guidance for attaining an adequate mobilization base; and
>
> (4) Provide sufficient information for program and budget personnel to develop detailed requirements and budget estimates.
>
> The process of tailoring and fitting programs requires a steady flow of information between program coordinators to ensure that as one program is modified, associated programs are altered to fit.[1]

The tailoring and fitting of programs result in a draft of program objectives which is submitted to the Office of the Comptroller for review and development of a rough price-out of the program objectives to assist in a determination if the cost is in a reasonably attainable range.

The proposed program objectives with their estimated costs are submitted to the CNO Advisory Board (CAB) for review. The Board studies each program and resolves existing controversies. CAB then submits the annual Program Objectives to the Chief of Naval Operations for his consideration and approval. The Commandant of the Marine Corps reviews

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[1] Department of the Navy, Office of the Comptroller, The Budget Process in Navy, October, 1959, p. 3-4.

program elements of Marine Corps interest. The next step in establishing program objectives is review and approval by the Secretary of the Navy. However, since the incorporation of the Program Change Control System, the programs must also be submitted to the Secretary of Defense for his consideration and formal approval.

> When the Secretary of Defense calls for the annual budget, the Military Departments will develop the required budgetary request documentation from the program for the budget year of the 5-year plan. Except in unusual instances, new programs will not be introduced in the presentation of the budget, and financial evelopes or budgetary limitations will no longer be established at the time of the budget call. The budget merely will provide a perspective from an appropriation and budget activity point of view for programs which have already been approved and whose total tentative financial requirements are known through the updated version of the "Five Year Force Structure and Financial Program."[1]

In the past, the Naval establishment was required to submit an estimate of budget expenditures which would be required to continue its programs for a year succeeding the budget year. Under the Program Change Control System, costs are projected five years into the future, while force structures are projected eight years into the future. These figures include all costs, not just the cost of the hardware, but costs for military personnel and other items necessary to make the program element an

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[1]Department of the Navy, Office of the Comptroller, Program Change Control System in the Department of the Navy, NAVEXOS P-2416, August, 1962, p. 3-1.

operational system.[1]

Under the old method, when at various times the Naval establishment developed new programs, they were submitted to the Joint Chiefs of Staff for approval. These approved programs served as the basis for the Secretary of Defense guidance in the preparation of the budget. Under the new method, the "Five-Year Force Structure and Financial Program" serves as the approved base plan and approved programs are not resubmitted each year for approval. But as previously stated, changes to approved programs may be submitted at any time; however, the latest approved program remains continuously in force.[2]

Review Process (General)

Before funds are finally appropriated by Congress, the budget for the Navy must undergo many reviews. The primary objective for the various reviews within the Department of the Navy is to determine the amount required to carry out the missions of the Navy as expressed by the approved programs. In the event a ceiling or target is set by higher authority,

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[1]White and Massey, p. 32.

[2]Department of the Navy, Office of the Comptroller, Program Change Control System in the Department of the Navy, NAVEXOS P-2416, August, 1962, p. 3-1.

then the review should strive to develop the best programs within the established fund limitations. Under the Program Change Control System no fund ceiling or target as such has been established. As can be seen from the above discussion, review plays an important role in budget formulation in Navy.

Beside determining the funds required to carry out the missions of the Navy, budget review has other objectives, depending on the level of review. For example, at the bureau level, the review process seeks to best balance and to distribute the resources over which the bureau has cognizance, to activities under particular bureau control. While at the CNO level a secondary objective of review is to resolve differences between bureaus in order to arrive at proper balance of resources required to accomplish the objectives. Final review within Navy is conducted at the Secretary of the Navy level. Differences among programs are resolved at this level prior to the budget being forwarded to the Secretary of Defense.[1]

Budget Review Within the Navy Department

The formal review of the budget for the Department of the Navy starts in the Office of the Comptroller. The NAVCOMPT review has several purposes, but primarily it is to develop an overall budget for consideration

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[1]Research Report of the 1961 Class Navy Graduate Comptrollership Program, Performance Budgeting and Financial Management in the Department of the Navy, The George Washington University, Washington, D. C., pp. 43-44; and Department of the Navy, Bureau of Naval Personnel, Financial Management in the Navy, NAVPERS 10792-A, 1962, pp. 49-50.

by the CNO Advisory Board and the top officials of the Navy.

> More specifically, central review is undertaken to insure:
>
> (1) that the budget request conforms with the program objectives;
>
> (2) that the fiscal policies and guidelines received from higher authorities have been applied in developing the budget;
>
> (3) that the pricing of programs is reasonable and that the programs appear feasible of attainment in the budget year;
>
> (4) that interdependent parts of the budget appear to be in phase and balance; and
>
> (5) that in areas where the program objectives are not specific or sufficiently clear, the bureaus and program sponsors are in agreement with respect to the size and scope of the program as well as the segment to be included in the budget.[1]

Figure 7 shows the review process that took place in the Navy for fiscal year 1964. On 7 July 1963, the Secretary of Defense approved the base program. Also during July and the first part of August the bureaus updated and corrected data relating to the cost of the various programs and elements for fiscal year 1963, as well as for fiscal years 1963-1968. Also during July the bureaus generated changes which were reviewed during the latter part of July by the program sponsors. On 1 August 1963, the changes generated by the General Purpose Study and Service were submitted to the Secretary of Defense for decision. Upon receipt of the Secretary's decisions on the submitted changes, the approved changes were incorporated by the bureaus. Simultaneously with the incorporation of the approved

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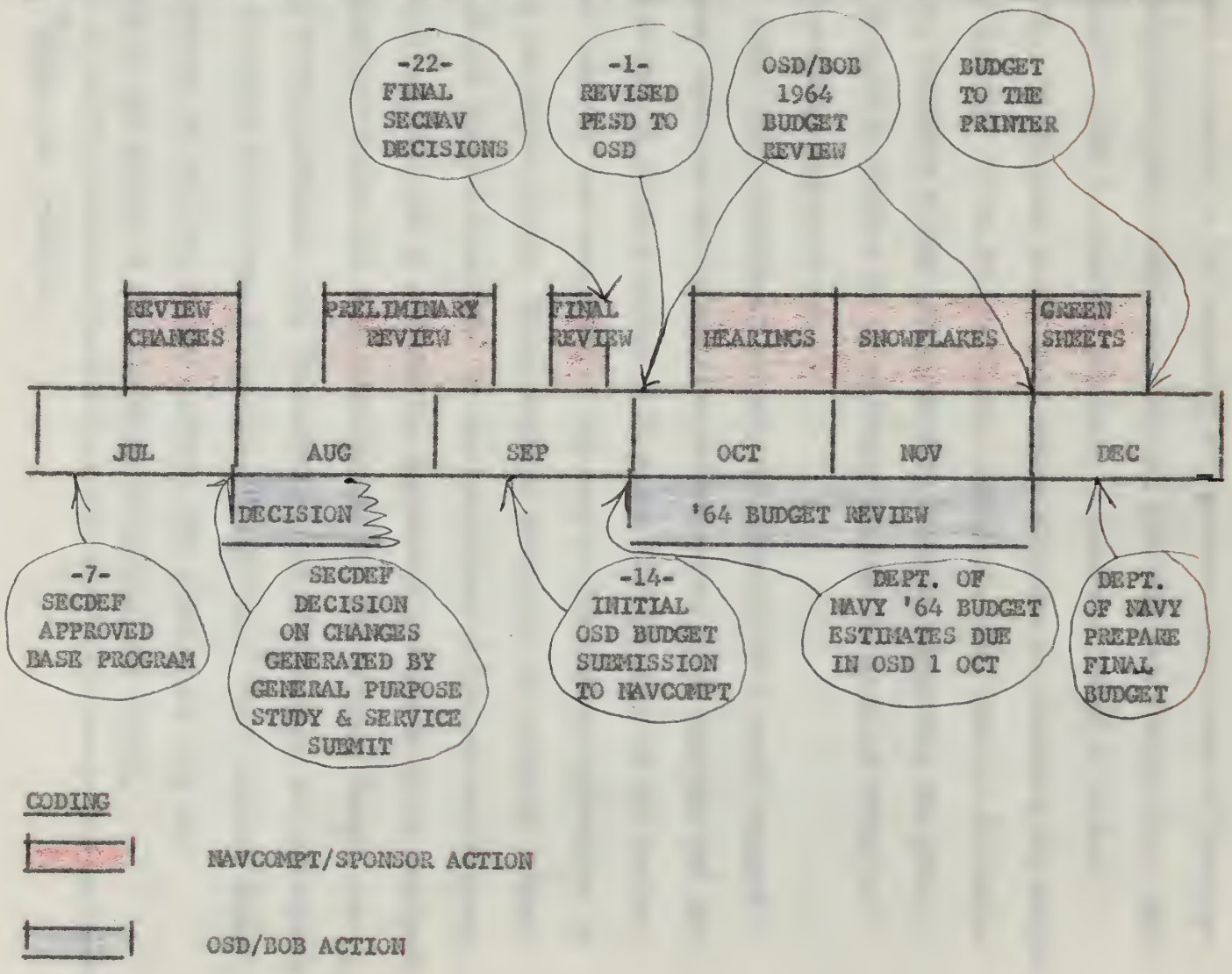
[1]Department of the Navy, Office of the Comptroller, The Budget Process in Navy, October, 1959, p. 4-5.

FIGURE 7

Review Process in Navy, FY 1964



changes the preliminary review in NAVCOMPT began about the middle of August when the bureaus, offices and Headquarters, Marine Corps submitted their estimates and ended in the beginning of September after weeks of hearings and discussions, both formal and informal with the Navy Comptroller. This preliminary review is somewhat governed by guidance issued by higher authority. In numerous cases, this review attempts to determine the method used in arriving at the dollar figures submitted. For example, the review seeked to determine if the estimates were based on projecting the prior year's dollars or whether it is an honest attempt in terms of known and jointly modified projected needs.

After this preliminary review, the Comptroller's staff prepared a "mark-up" based on the information determined at these hearings and the revised budget is further evaluated in terms of objectives of the review. When the "mark-up" was completed it was sent to the bureaus and offices of the Navy and Marine Corps. These proposed revisions, if rejected, became the basis for reclama hearings. At the completion of the reclama hearings, the budget was adjusted to reflect the agreements reached at those hearings. The "marked-up" budget was then submitted to the CNO Advisory Board, the Chief of Naval Operations, the Commandant of the Marine Corps and ultimately to the Secretary of the Navy for review and approval.[1] On 1 October 1963, the Department of the Navy budget estimate for fiscal year 1964 was submitted to the Office of the Secretary of Defense for review.

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[1] Ibid., pp. 4-6-4-14.

Prior to the Program Change Control System, the Navy's budget was theoretically divided among its approved programs, and as long as the Navy remained within its budget ceiling, it was relatively free to increase its effort in one program providing it made corresponding reductions in other program(s). This meant that if the Navy decided to increase its carrier strike force it would have to make compensatory reductions in other sectors such as Polaris, anti-submarine warfare, or some other unrelated field. Under the old system, it was extremely difficult to make effective trade-offs when the overall defense effort was considered. It was impossible to determine if the country would benefit by these trade-offs among the programs.

With the Program Change Control System in effect, program changes are now made within the context of the Program Change Control System, which corresponds to missions required to defend the United States and carrying out its policies, rather than the missions assigned to any individual service. The Secretary of Defense now divides the resources among all the programs in such a way to assure a maximum program capability. If the decision is made to place more resources into the Titan missile program, then compensatory reductions are made in program elements of the Strategic Retaliatory Forces Program, such as, Polaris, Atlas, B-52, etc. Under the Program Change Control System, the Secretary of Defense can now make critical decisions based on relative cost and effectiveness.[1]

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[1]White and Massey, pp. 24-25.

Up until the time the Navy Department budget is submitted to the Secretary of Defense the review process of budget-making is an internal, self-examination process designed to produce a balanced naval program in support of the planning objectives. From the Navy Department's standpoint, the budget consideration by the Secretary of Defense, the Bureau of the Budget, the President and Congress should not be thought of in terms of a review. It is, in fact, a "selling" job. The competition for dollars within the Department of Defense is extremely keen.[1]

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[1]Research Report of the 1961 Class Navy Graduate Comptrollership Program, Performance Budgeting and Financial Management in the Department of the Navy, The George Washington University, Washington, D. C., 1961, p. 41.

CHAPTER V

AN ANALYSIS OF THE PROGRAM CHANGE CONTROL SYSTEM

General

Since the establishment of the First Hoover Commission there have been numerous suggestions for improving government's decision-making process by making greater use of those techniques found in business. It must be realized at this point that there are many business management techniques which are not appropriate for use in government. However, the basic financial planning of government and business are similar in that both are primarily concerned with the problem of effective resource allocations in accomplishing their respective objectives.

Because of the appropriation system found in government, it is often thought that financial planning in government and business are completely unrelated. This is not so, because the problems which are considered characteristic of the appropriation system of government are also found in business. Any decision-maker, whether he be in government or business, who requires the approval of higher authority for his financial support has good reason to do his utmost to maximize the use of funds which he receives.

In business as well as in government, the budget should be used to relate goals to the resources which are required in attaining them. Therefore, the budget process in government should be based on programs, projects, functions, etc., and not just a summation of costs for objects, organizations, procurements, etc.

Budgeting can always be improved in order that better quantitative information can be brought to bear on policy and for translating policy goals into quantifiable planning objectives.[1]

Information System for Decision-Making

The Program Change Control System of the Department of Defense attempts to translate policy goals into quantifiable planning objectives through its mission-oriented planning-programming-budgeting system. The following words were spoken by Mr. McNamara in testimony before the Senate Armed Services Committee:

> Because of the technical complexity of modern-day weapons, their lengthy period of development, their tremendous combat power, and their enormous cost, sound choices of major weapon systems in relation to military tasks and missions have become the key decisions around which much else of the Defense Program revolves. But the full cost complications of these decisions, present and future, cannot be ascertained unless both the program and their cost are projected over a period of years.[2]

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[1]P. R. McClenon, Should We Make the Government More Businesslike? (The RAND Corporation, Paper P-2695, January, 1963), pp. 1-3.

[2]David Novick, Tomorrow's Weapon Systems Costing (The RAND Corporation, Research Memorandum, RM-3170, June, 1962), p. 1.

So that the Secretary of Defense would have some basis for determining the magnitude of the present as well as the future costs of his decisions, he instituted through the Program Change Control System requirements that the services estimate the cost of their various program elements projected out for five-years and the force structure for eight-years. From a decision-making point of view this was a needed improvement from the previous method of projecting costs one-year beyond the budget year. It can be readily seen that with the increasing technical complexity of today's weapon systems and their tremendous cost, costs estimated one-year beyond the budget year was an antiquated system from the present day decision maker's viewpoint.

The Five-Year Force Structure and the Financial Management Program gives the Secretary of Defense a greater understanding of the short-range as well as the long-range effects of his decisions to allocate resources.

> A decision to procure a given quantity of hardware carries with it an obligation for facilities acquisition and training of personnel, personnel housing, support equipment and a host of other related items, all of which must be paid for. In addition, a procurement decision implies a decision to incur annual recurring costs so long as the system remains in the inventory. A full identification of the timing and cost of these requirements is essential to a full understanding of the resource impact of a given decision.[1]

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[1] *Ibid.*, p. 1.

The SKYBOLT program is an illustration of the advantage of this information system of projecting costs into the future in determining the desirability of continuing a specific program in relation to its cost-effectiveness through the comparison of alternatives. In this program, the Secretary of Defense was able to make a decision based on the information supplied by the system--the resources already expended on the SKYBOLT program, the effectiveness realized to a specific point in time, and an estimate of costs projected into the future to a point in time when the program would be completely operational. Based on this information, Mr. McNamara was able to make a decision to discontinue the program in favor of an alternate weapon system based on this cost-effectiveness principle, thus saving hundreds of millions of dollars.

A more recent illustration of how Defense Secretary McNamara relied on the Program Change Control System as a source of information for decision-making, is contained in his selection of the General Dynamics Corporation over the Boeing Corporation to develop an all-purpose TFX warplane which could be used both by the Navy in carrier operations as well as by the Air Force for land-based operations. Mr. McNamara stated,

> I decided to select General Dynamics as the development contractor, since I concluded that it was best qualified to design the most effective airplane that could be produced at the least cost, in the least time, to meet our military requirements.

He added that

> It should be unnecessary to add that no other consideration entered into my judgment.[1]

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[1] The Washington Post, March 14, 1963, p. A-8.

Summary

It was not until after World War II, with the establishment of the Hoover Commission, that the military began to show progress in relation to the budgetary process. However, even after the passage of Public Law 216, (Title IV--National Security Amendments of 1949) which directed the Department of Defense to adopt a performance-type budget, it took the services until 1953 to make the change-over.

Some of the accomplishments which took place between the enactment of Public Law 216 and the establishment of the present system are as follows:

1. The Defense budget structure was simplified and rationalized under five principal titles--Military Personnel; Operations and Maintenance; Procurement; Research, Development, Test and Evaluation; and Military Construction;

2. The appropriation accounts were greatly reduced;

3. Comptroller organizations were established throughout the Defense Department; and

4. There were established basic patterns for budget program and accounts.

As a result of the Soviet Union's successful launching of Sputniks and increasing evidence of interservice rivalry, particularly in the field of missiles, further reorganization of the Defense Department became a necessity. This reorganization has primarily been accomplished by Defense

Secretary McNamara through the existing administrative powers of his office. Through these powers the Secretary of Defense has reorganized all the principal offices within the Department of Defense. In addition, he established a new procedure for budget formulation which has as its objective to supply information to relate the cost-effectiveness of alternative weapon systems. This new procedure for budget formulation is the Program Change Control System.

This system is an information system which brings together in a uniform manner, program elements and cost information on which the Secretary of Defense can make a selection among the proposed alternatives based on cost-effectiveness. By grouping the various program elements into various programs, the Secretary of Defense now knows what alternative systems are available to perform the various assigned missions now and in the future.[1]

As a result of the placement of program elements into programs based on the mission to be performed, such as strategic retaliatory forces, continental air and missile defense forces, general purpose forces, etc., a proper mix of forces can be obtained based on national missions rather than on the missions assigned to the individual services. With the centralization of power within the Pentagon, the country now has a reasonable assurance that its defense posture will be eventually balanced

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[1]Department of the Navy, Office of the Comptroller, Program Change Control System in the Department of the Navy, NAVEXOS P-2416, August, 1962, p. 1-4.

so that the country will be prepared to meet any eventuality.

Under the old system, the services were allotted a "slice of the pie" and the services were relatively free as to how they could allot the funds among their various programs. In addition, the services could shift funds among their various programs. Individual service programs competed against each other for funds, such as carrier strike force competing for funds against Polaris, amphibious shipbuilding, mine warfare, etc. Under this system there wasn't the assurance that presently exists that the blend of the nation's forces are such as to carry out the national policies.

With the establishment of the Program Change Control System, the Secretary of Defense no longer allots a slice of the pie to each of the services. Under this system, program elements of one service compete with program elements of other services; the Navy's Polaris program now has to compete with other alternates of the other services in the Strategic Retaliatory Forces Program instead of programs within Navy. In addition, this new approach assures greater economy through the elimination of unnecessary duplication of military effort.[1]

Now, as a result of the cost-effectiveness approach of the Program Change Control System, the Secretary of Defense has a sound basis to answer Congressional inquiries in relating missions to costs. In addition, Mr. McNamara now has a basis on which to answer inquiries as to the effect

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[1]"Defense Budget Acts Unified for the First Time," Business Week, February 3, 1962, p. 72.

an increase or decrease of funds will have on the nation's military effectiveness.

Conclusion

The Program Change Control System should be viewed as a step in the right direction, with significant improvements to enhance the decision-making process in the Department of Defense. It adds flexibility to Defense's financial management and decision-making process.

The system will continue to serve many purposes. Budgets will continue to be developed, justified and executed in accordance with the desires of the Congress. Funds will continue to be accounted for in the same manner in which they are appropriated. The reason that this will not change in the foreseeable future is not because Congress does not feel this system is an improvement or that they do not trust the Secretary of Defense, but because the Congress dislikes giving up some of its authority to the Executive Branch of government.

Decision-makers at all levels will continue to receive the financial information on which to plan and execute programs. In addition, the system will continue to supply the information needed by top management to make decisions between alternatives based on cost-effectiveness.

The question is often raised concerning the future of the Program Change Control System after Mr. McNamara leaves as head of the Defense

Department. The main concern is for the system--whether it will be able to survive under the direction of someone else. Mr. McNamara has demonstrated his outstanding ability to operate the largest business in the world through strong centralization. Indeed, it will be most difficult to replace this man. However, various high ranking officials both in the military and government who are familiar with the system as well as the present organization within the Pentagon, are convinced that the system will continue. This is because the system is founded on basic management philosophy.

APPENDIX

Many terms in common usage in management and budgetary literature have a special meaning when used in connection with the Program Change Control System. When these terms are used in this publication they have the following meaning.

construction annex	A listing of major military construction projects with descriptive information, cost data and scheduled dates.
cost category	A broad categorization into which program elements are classified, corresponding to the three major phases by which new weapons systems are introduced; namely, research and development, investment and operations (formerly resource category).
investment	A cost category covering cost required beyond the development phase to introduce a new capability into operational use. All Military Construction appropriation costs except those associated with development are included. RDT&E, Military Personnel and

	Operation and Maintenance appropriation costs are excluded.
material annex	A listing of procurement line items, selected by OSD because of their size or importance, with descriptive information, cost data, production and delivery schedules and inventory data.
operation	A cost category covering recurring costs required to operate and maintain a capability throughout its projected life in operational use. Military Personnel, Operation and Maintenance, and recurring Procurement appropriation costs are included in this category. RDT&E and Military Construction appropriation costs are excluded.
program	A broad aggregation of program elements based on a common mission or set of purposes. Within this grouping, the program elements either complement each other or are close substitutes which should be considered together in making major program decisions.
program change	An adjustment in the latest approved "Five-Year Force Structure and Financial Program" submitted

	whenever variances (increases or decreases) exceed specific thresholds.
program element	An integrated activity, a combination of men, equipment and facilities which together constitute an identifiable military capability or support activity.
research and development	A cost category covering costs primarily associated with development of a new capability to the point where it is ready for operational use and including equipment (prototypes, test vehicles, etc.) required in the development program to the extent such equipment is funded by RDT&E appropriations. Related Military Construction appropriation costs will also be included.
thresholds	A set of criteria which, if met, require a program change to be submitted for the approval of the Secretary of Defense.
total obligational authority	The total financial requirements for a given program element or Material Annex item for a fiscal year's program, including: a. Unprogrammed obligational authority. b. Unprogrammed obligational authority brought forward from prior years.

c. Obligational authority reprogramed from prior years budget plans.

d. Reimbursements usable for the service account (from inventory sales not replaced in kind).

e. Unobligated balances transferred from other appropriations.

f. Advance funding for SecDef approved program to be initiated in future years.[1]

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[1]Department of the Navy, Office of the Comptroller, Program Change Control System in the Department of the Navy, NAVEXOS P-2416, August, 1962, pp. A-1-A-3.

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